Gunter, Jason

From: Nations, Mark <mnations@doerun.com>
Sent: Wednesday, March 12, 2014 8:48 AM
To: Gunter, Jason
Cc: Yingling, Mark; Wohl, Matthew; 'Kevin Lombardozzi' (kevinl@VALHI.NET); Norman Lucas (cityhall@i1.net); robert.hinkson@dnr.mo.gov; brandon.wiles@dnr.mo.gov; Ty Morris (TMorris@barr.com); Cummings, Mark; Sanders, Amy B.
Subject: National Progress Report
Attachments: NATL_02-14.doc; 2014-02-25 NAT UAO Pace Lab Report.pdf

Jason, attached is the February report.
Mark

THE DOE RUN COMPANY

Remediation Group

Mark Nations
Mining Properties Manager
mnations@doerun.com

March 11, 2014

Mr. Jason Gunter
Remedial Project Manager
U.S. Environmental Protection Agency
Region 7 - Superfund Branch
11201 Renner Blvd.
Lenexa, KS 66219

Re: National Mine Tailings Site Progress Report

Dear Mr. Gunter:

As required by Article VI, Section 51 of the Unilateral Administrative Order (Docket No.CERCLA-07-2006-0231) for the referenced project and on behalf of The Doe Run Company and NL Industries, Inc., the progress report for the period February 1, 2014 through February 28, 2014 is enclosed. If you have any questions or comments, please call me at 573-518-0800.

Sincerely,

Mark Nations
Mining Properties Manager

Enclosure
c: Mark Yingling – TDRC (electronic only)
Matt Wohl – TDRC (electronic only)
Kevin Lombardozzi – NL Industries, Inc.
Matt Whitwell – City of Park Hills
Norm Lucas – Park Hills – Leadington Chamber of Commerce
Robert Hinkson – MDNR
Brandon Wiles – MDNR
Ty Morris – Barr Engineering

National Mine Tailings Site
Park Hills, Missouri
Removal Action - Monthly Progress Report
Period: February 1, 2014 – February 28, 2014

1. **Actions Performed and Problems Encountered This Period:**

   a. Work continued on the development of the Removal Action Report and the record drawings.

2. **Analytical Data and Results Received This Period:**

   a. During this period, water samples were collected at the sampling locations identified in Appendix C of the Removal Action Work Plan where water was present. Copies of the analytical results from the last sampling event are included with this progress report.

   b. During this period, the Ambient Air Monitoring Reports for October 2013 and November 2013 were completed. Any issues identified in these reports are discussed below. A copy of these documents has been sent to your attention.

      The October 2013 Ambient Air Monitoring Report noted the following:

      - The action levels for lead and dust were not exceeded.
      - No sample was taken on the Big River #4 TSP monitor on 10/04/13 due to the run time of the monitor being outside of the acceptable limits. This issue has been addressed.
      - There was a QA blank filter for the National #3 (Water Plant) TSP and PM_{10} monitors on 10/11/13.
      - No sample was taken on the Big River #4 TSP monitor on 10/16/13 due to unknown reasons. Follow-up inspections of the monitor indicated that the monitor is working properly.
      - No sample was taken on the Big River #4 TSP monitor on 10/29/13 due to an electrical failure. Upon discovery, this issue was addressed.
      - No sample was taken on the Big River #4 TSP monitor on 10/30/13 due to a mechanical failure. Upon discovery, this issue was addressed.
      - No sample was taken on the National #3 (Water Plant) PM_{10} monitor on 10/31/13 due to a mechanical failure. Upon discovery, this issue was addressed.

      The November 2013 Ambient Air Monitoring Report noted the following:

      - The action levels for lead and dust were not exceeded.
      - There was a QA blank filter for the Big River #4 QA TSP monitor on 11/19/13.
      - No sample was taken on the National #3 (Water Plant) PM_{10} monitor on 11/21/13 due to a mechanical failure. Upon discovery, this issue was addressed.
      - No sample was taken on the National #1 (Ozark Insulation) TSP monitor on 11/26/13 due to the run time of the monitor being outside of the acceptable limits. This issue has been addressed.
      - No samples were taken with the TSP monitors on 11/27/13, 11/28/13, or 11/29/13 due to the holiday.
      - No samples were taken with the PM_{10} monitors on 11/30/13 due to the holiday.

3. **Developments Anticipated and Work Scheduled for Next Period:**

   a. Continue developing the Removal Action Report and the record drawings.

   b. Complete monthly water sampling activities as described in the Removal Action Work Plan.

   c. Complete air monitoring activities as described in the Removal Action Work Plan.

4. Changes in Personnel:

a. None.

5. Issues or Problems Arising This Period:

a. None.

6. Resolution of Issues or Problems Arising This Period:

a. None.

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(913)599-5665

March 10, 2014

Amy Sanders
The Doe Run Company
P. O. Box 500
Viburnum, MO 65566

RE: Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

Dear Amy Sanders:
Enclosed are the analytical results for sample(s) received by the laboratory on February 27, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jamie Church
jamie.church@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-13-4
Utah Certification #: KS000212013-3
Illinois Certification #: 003097

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60163756001	**NAT EAST**	Water	02/25/14 13:40	02/27/14 08:20

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(913)599-5665

SAMPLE ANALYTE COUNT

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60163756001	**NAT EAST**	EPA 200.7	TJT	6	PASI-K
		EPA 200.7	SMW	3	PASI-K
		SM 2540C	JMC1	1	PASI-K
		SM 2540D	JMC1	1	PASI-K
		SM 2540F	JMC1	1	PASI-K
		SM 4500-H+B	DJR	1	PASI-K
		EPA 300.0	OL	1	PASI-K
		SM 5310C	DJR	1	PASI-K

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ANALYTICAL RESULTS

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

Sample: NAT EAST **Lab ID: 60163756001** Collected: 02/25/14 13:40 Received: 02/27/14 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium	ND	ug/L	5.0	0.56	1	02/27/14 13:15	02/28/14 15:13	7440-43-9	
Calcium	**102000**	ug/L	100	7.8	1	02/27/14 13:15	02/28/14 15:13	7440-70-2	
Lead	**4.1J**	ug/L	5.0	2.2	1	02/27/14 13:15	02/28/14 15:13	7439-92-1	
Magnesium	**54900**	ug/L	50.0	17.0	1	02/27/14 13:15	02/28/14 15:13	7439-95-4	
Total Hardness by 2340B	**482000**	ug/L	500		1	02/27/14 13:15	02/28/14 15:13		
Zinc	**133**	ug/L	50.0	12.5	1	02/27/14 13:15	02/28/14 15:13	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Cadmium, Dissolved	ND	ug/L	5.0	0.56	1	03/05/14 11:45	03/05/14 17:27	7440-43-9	
Lead, Dissolved	**5.8**	ug/L	5.0	2.2	1	03/05/14 11:45	03/05/14 17:27	7439-92-1	
Zinc, Dissolved	**121**	ug/L	50.0	12.5	1	03/05/14 11:45	03/05/14 17:27	7440-66-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**559**	mg/L	5.0	5.0	1		03/03/14 13:30		
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**6.0**	mg/L	5.0	5.0	1		03/04/14 07:47		
2540F Total Settleable Solids	Analytical Method: SM 2540F								
Total Settleable Solids	ND	mL/L/hr	0.20	0.20	1		02/27/14 10:00		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH at 25 Degrees C	**8.4**	Std. Units	0.10	0.10	1		03/03/14 06:41		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Sulfate	**234**	mg/L	20.0	2.0	20		03/09/14 18:36	14808-79-8	
5310C TOC	Analytical Method: SM 5310C								
Total Organic Carbon	**0.96J**	mg/L	1.0	0.50	1		03/03/14 13:04	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

QC Batch: MPRP/26284
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60163756001

METHOD BLANK: 1336288 Matrix: Water
Associated Lab Samples: 60163756001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	ND	5.0	02/28/14 14:35	
Calcium	ug/L	21.6J	100	02/28/14 14:35	
Lead	ug/L	ND	5.0	02/28/14 14:35	
Magnesium	ug/L	ND	50.0	02/28/14 14:35	
Total Hardness by 2340B	ug/L	ND	500	02/28/14 14:35	
Zinc	ug/L	ND	50.0	02/28/14 14:35	

LABORATORY CONTROL SAMPLE: 1336289

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	1000	1030	103	85-115	
Calcium	ug/L	10000	10300	103	85-115	
Lead	ug/L	1000	1090	109	85-115	
Magnesium	ug/L	10000	9950	99	85-115	
Total Hardness by 2340B	ug/L		66600			
Zinc	ug/L	1000	1050	105	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1336290 1336291

Parameter	Units	60163611003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium	ug/L	ND	1000	1000	1050	1050	105	105	70-130	0	10	
Calcium	ug/L	317000	10000	10000	331000	330000	141	133	70-130	0	9	M1
Lead	ug/L	ND	1000	1000	1040	1030	103	103	70-130	1	10	
Magnesium	ug/L	108000	10000	10000	120000	119000	121	117	70-130	0	9	
Total Hardness by 2340B	ug/L	1240 mg/L			1320000	1320000				0		
Zinc	ug/L	ND	1000	1000	1010	1010	99	100	70-130	0	11	

MATRIX SPIKE SAMPLE: 1336292

Parameter	Units	60163611004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	ND	1000	1040	104	70-130	
Calcium	ug/L	34200	10000	44200	100	70-130	
Lead	ug/L	ND	1000	1010	101	70-130	
Magnesium	ug/L	145000	10000	158000	123	70-130	
Total Hardness by 2340B	ug/L	684 mg/L		760000			
Zinc	ug/L	ND	1000	1030	101	70-130	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

QC Batch: MPRP/26331
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60163756001

METHOD BLANK: 1338958
Matrix: Water
Associated Lab Samples: 60163756001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	ND	5.0	03/05/14 16:59	
Lead, Dissolved	ug/L	ND	5.0	03/05/14 16:59	
Zinc, Dissolved	ug/L	ND	50.0	03/05/14 16:59	

LABORATORY CONTROL SAMPLE: 1338959

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium, Dissolved	ug/L	1000	873	87	85-115	
Lead, Dissolved	ug/L	1000	888	89	85-115	
Zinc, Dissolved	ug/L	1000	872	87	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1338960 1338961

Parameter	Units	60163755001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium, Dissolved	ug/L	ND	1000	1000	968	907	97	91	70-130	7	10	
Lead, Dissolved	ug/L	ND	1000	1000	948	894	95	89	70-130	6	10	
Zinc, Dissolved	ug/L	144	1000	1000	1070	1010	93	87	70-130	6	11	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

QC Batch: WET/46389
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 60163756001

METHOD BLANK: 1336622 Matrix: Water
Associated Lab Samples: 60163756001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	03/03/14 13:10	

LABORATORY CONTROL SAMPLE: 1336623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1040	104	80-120	

SAMPLE DUPLICATE: 1336625

Parameter	Units	60163767003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1060	860	21	10	D6

SAMPLE DUPLICATE: 1336626

Parameter	Units	60163601001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	944	1010	7	10	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

QC Batch: WET/46446 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60163756001

METHOD BLANK: 1338179 Matrix: Water
Associated Lab Samples: 60163756001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	03/04/14 07:43	

SAMPLE DUPLICATE: 1338180

Parameter	Units	60163690002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	8.0		10	

SAMPLE DUPLICATE: 1338181

Parameter	Units	60163753002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6.0	5.0	18	10	D6

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

QC Batch: WET/46416
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60163756001

SAMPLE DUPLICATE: 1337764

Parameter	Units	60163726005 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.6	8.7	0	5	H6

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

QC Batch: WETA/28501 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60163756001

METHOD BLANK: 1340323 Matrix: Water
Associated Lab Samples: 60163756001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	03/09/14 17:19	

LABORATORY CONTROL SAMPLE: 1340324

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1340325 1340326

Parameter	Units	60163755001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	391	250	250	648	655	103	106	80-120	1	15	

MATRIX SPIKE SAMPLE: 1340327

Parameter	Units	60163756001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	234	100	339	105	80-120	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

QC Batch: WETA/28415
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 60163756001

METHOD BLANK: 1337948 Matrix: Water
Associated Lab Samples: 60163756001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	03/03/14 10:27	

LABORATORY CONTROL SAMPLE: 1337949

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	5	4.8	95	80-120	

MATRIX SPIKE SAMPLE: 1337950

Parameter	Units	60163123019 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	5	5.4	100	80-120	

SAMPLE DUPLICATE: 1337951

Parameter	Units	60163185003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	6.5	7.1	8	25	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K	Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NATIONAL (MONTHLY)
Pace Project No.: 60163756

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60163756001	**NAT EAST**	EPA 200.7	MPRP/26284	EPA 200.7	ICP/20065
60163756001	**NAT EAST**	EPA 200.7	MPRP/26331	EPA 200.7	ICP/20094
60163756001	**NAT EAST**	SM 2540C	WET/46389		
60163756001	**NAT EAST**	SM 2540D	WET/46446		
60163756001	**NAT EAST**	SM 2540F	WET/46377		
60163756001	**NAT EAST**	SM 4500-H+B	WET/46416		
60163756001	**NAT EAST**	EPA 300.0	WETA/28501		
60163756001	**NAT EAST**	SM 5310C	WETA/28415		

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Sample Condition Upon Receipt

WO#: 60163756

60163756

Client Name: Doe Run

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 7980 3906 3161 Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other ☑ 2 pic

Thermometer Used: T-239 / T-194 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 3.6

Date and initials of person examining contents: 2/27/14 BA

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. Sett Sol, pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked	☑Yes ☐No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14.
Exceptions: VOA, coliform, (TOC) O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed / Lot # of added preservative
Trip Blank present: Pace Trip Blank lot # (if purchased):	☐Yes ☐No ☑N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Jami Church 2/27/14 Date: _____

Pace Analytical™
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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page:	1	of	1

Section A
Required Client Information:

Company:	The Doe Run Company
Address:	PO Box 500
	Viburnum, MO 65566
Email To:	asanders@doerun.com
Phone: 573-689-4535	Fax: 573-244-8179
Requested Due Date/TAT:	5 - 7 Days

Section B
Required Project Information:

Report To:	Amy Sanders
Copy To:	
Purchase Order No.:	
Project Name:	National (Monthly)
Project Number:	

Section C
Invoice Information:

Attention:	Amy Sanders
Company Name:	The Doe Run Company
Address:	PO Box 500, Viburnum, MO 65566
Pace Quote Reference:	
Pace Project Manager:	Jamie Church
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES	☐ GROUND WATER	☐ DRINKING WATER
☐ UST	☐ RCRA	☑ OTHER ______

Site Location STATE:	MO

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
	WP
	AR
	OT
	TS

Requested Analysis Filtered (Y/N)

60163756

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	↓Analysis Test↓ Y/N	TSS/TDS	Sulfate	Settleable Solids	TOC	Cd, Pb, Zn (T&D)*	Hardness	pH						Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																						N										
1	Nat East	W	G			02/25/14	~~1045~~ 1340	[illegible]	4	2	1								x	x	x	X	x	x	x						N	1BP1U 1BP2U 1BP3N 1.5 1AG3S 001
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
* 200.7 Total Recoverableand Dissovied Metals (Lab Filter for dissolved)	Larry Hopkins Doe Run	2/25/14	1600	[signature] /PASI KS	2/27/14	0820	3.6	Y	Y	Y
**analyzed within 24 hours with flagged data										

SAMPLE CONDITIONS

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:	Larry Hopkins
SIGNATURE of SAMPLER:	Larry Hopkins [signature]
DATE Signed (MM/DD/YY):	2/25/14

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.08, 12-Oct-2007